

FIELD CROP ABSTRACTS

Volume 28



**Commonwealth Bureau of Pastures
and Field Crops, Hurley**

1975

ISSN 0015-069X

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published by

Commonwealth Agricultural Bureaux,
Farnham House, Farnham Royal,
SLOUGH SL2 3BN, UK.

printed by

The Cambrian News Ltd., Queen Street, Aberystwyth, Dyfed, UK

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CAB provides the only comprehensive information service for agricultural research workers. It is based on 19 abstract journals which, taken together, cover the whole range of agricultural science. Contemporary world literature in many languages is scanned for items worthy of noting by abstract or title in the journals, and since 1973 all references have been taped. The current data base, already containing $\frac{1}{4}$ million items, grows by approximately 125,000 references per annum, and all or part can now be made available for machine retrieval.

Identification services are provided for entomologists, mycologists and helminthologists. Other services include: bibliographies (with or without annotations), review articles, technical monographs (some of which are standard works), photocopies of source papers, answering enquiries.

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COMMONWEALTH BUREAU OF PASTURES AND FIELD CROPS

HURLEY, MAIDENHEAD, BERKS SL6 5LR, UK

The Commonwealth Bureau of Pastures and Field Crops is located at the Grassland Research Institute, Hurley, and one of a group of 10 Bureaux and 4 Institutes which together form the Commonwealth Agricultural Bureaux, an organization financed and administered jointly by the various Commonwealth Governments and Dependent Territories. The Commonwealth Agricultural Bureaux produce 20 abstract journals covering the major branches of agricultural and related sciences. These journals and their subscription rates are listed on the back cover.

The Bureau prepares two monthly journals, *Herbage Abstracts* and *Field Crop Abstracts*, for publication by the Commonwealth Agricultural Bureaux, Farnham Royal, Bucks. These journals contain abstracts of the research findings reported in the world scientific literature on annual field crops, pastures, herbage plants and rangelands and provide both a comprehensive guide to current scientific and technological developments in their subjects and a key to the literature published in the past. In addition to abstracts, the Bureau also issues reviews and monographs on selected subjects.

Scope of Field Crop Abstracts: The subjects covered include the agronomy and major aspects of the biology of all annual field crops grown for food, fodder, oil and fibre, and of tobacco. Land use, farming systems, agricultural meteorology and the control of weeds, pests and diseases are dealt with only in so far as they concern the crop coverage:

The Bureau is prepared, on request, to undertake literature searches and to compile bibliographies on subjects within its scope. A list of bibliographies already compiled is published in this journal.

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NOTES TO READERS

The address given at the end of abstract citations is that of the first author at the time of writing and is normally where the work was carried out.

Transliteration of Cyrillic script is based on the International Standard ISO/R9 1968 (E).

The titles of periodicals and reports conform where possible to those given in the *World List of Scientific Periodicals* (4th Edn; London: Butterworth) and are listed in *Field Crop Abstracts* Vol. 25, No. 1, pp. xix-xiv; they can also be obtained as a separate from the Bureau of Pastures and Field Crops, Hurley, Maidenhead SL6 5LR, price £0.25.

One-side-only copies of *Field Crop Abstracts* are available at £3.00 above the annual subscription rate.

LANGUAGE SYMBOLS

The language symbols used are listed below. An initial capital letter denotes the main language of a paper, a small letter the language of the summary(ies).

Af	Afrikaans	Fi	Finnish	Nl	Dutch, Flemish
Al	Albanian	Fr	French	No	Norwegian
Ar	Arabic	Gr	Greek	Pe	Persian
Be	Belorussian	He	Hebrew	Pl	Polish
Bg	Bulgarian	Hu	Hungarian	Pt	Portuguese
Ch	Chinese	Ia	Interlingua	Ro	Romanian
Cr	Croat	In	Indonesian	Ru	Russian
Cs	Czech	Is	Icelandic	Sh	Serbo-Croat
Da	Danish	It	Italian	Sk	Slovak
De	German	Ja	Japanese	Sn	Slovene
Ee	Estonian	Ko	Korean	Sr	Serbian
En	English	La	Latin	Sv	Swedish
Eo	Esperanto	Li	Lithuanian	Tr	Turkish
Es	Spanish	Lv	Latvian	Uk	Ukrainian
		Ma	Macedonian		

ABBREVIATIONS

The abbreviations used for the names of common units, mathematical operations, chemical elements, etc., are in accordance with British Standard 1991 : 1967. The following additional abbreviations are also used:

a.e.	—	acid equivalent	FCA	—	<i>Field Crop Abstracts</i>
a.i.	—	active ingredient	HbA	—	<i>Herbage Abstracts</i>
alt.	—	altitude	LAI	—	leaf-area index
CGR	—	crop growth rate	LAR	—	leaf-area ratio
cv.	—	cultivar(s)	NAR	—	net assimilation rate
DM	—	dry matter	OM	—	organic matter
F . . . s	—	from . . . summary	RGR	—	relative growth rate
f.y.m.	—	farmyard manure			

ERRATA

(lines are counted from the beginning of the bibliographic data in each item.)

Volume 28

Page	Abstract	Line	
7	64	6,7	For 'leaves of winter wheat' read 'were held in the dark'
18	174	2	For 'Arkansas Farm Research' read ' <i>Arkansas Farm Research</i> '
31	305	6	For 'cellulose' read 'cellulase'
53	542	8	Insert 'P ₂ O ₅ ' after 'N + 60 kg'
58	629	12	Insert 'treatment' after 'foliar'
69	723	2	For 'labelled' read 'labeled'
87	900	16	For '>450°' read '<450°'
93	960	2	For 'on' read 'in'
107	1110	1,2	For 'Zashchita Rastenii' read ' <i>Zashchita Rastenii</i> '
138	1467	21	Insert 'matured 2-4 days earlier than at 52 plants/m ² ' after 'm ² '
141	1499	14	Insert 'perpendicular' after 'more'
176	1851	13	For '2nd-chamber' read '2nd growth-chamber'
268	2666	9	Insert 'were also significant. Carbohydrate content within a given cultivar' after 'cultivar'
272	2713	19	For 'Okayama,' read 'Okayama. Leaf alkaloid contents were highest in samples from Lexington and Okayama,'
302	3021	8	Insert 'at the lowest plant density. Maximum root sugar contents were obtained' after 'obtained'
329	3304	12	For 'middle' read 'top'
345	3459	11	Insert 'and between K and Ca negative' before 'except'
362	3632	10	After 'were' read 'in the ratio 1:2:1 or 2:1:1. The increases in seed protein contents were'
375	3772	9	After 'numbers' read 'are reported for various stages of growth and the numbers'
387	3898	16	Insert 'efficiency' before 'was'
434	4421	9	Insert 'or' before 'CaCl ₂ '
467	4782	4	For ' <i>Instytutu</i> ' read ' <i>Instytutu</i> '
473	4851	5	For 'Kirobavad' read 'Kirovabad'
474	4860	2	Insert 'Home' after 'and'
475	4875	12	Change full stop to comma
475	4878	6	For 'Pustin' read 'Pustyn'
479	4916	7	For 'Armavinskoi' read 'Armavirskoi'
480	4922	15	For 'leaf-blade proportions' read 'in (b)'
482	4943	8	For ' <i>Selaria</i> ' read ' <i>Setaria</i> '
482	4943	12	For ' <i>yaguaronensa</i> ' read ' <i>yaguaronense</i> '
482	4947	15	For 'chanfrom' read 'changes of transpiration from'
484	4964	5	For 'fitosenozakh' read 'fitotsenozakh'
486	4999	5	For 'prienenie' read 'primenenie'
528	5464	3	For 'Biochemie und Physiologie der Pflanzen' read ' <i>Biochemie und Physiologie der Pflanzen</i> '
533	5518	3	Insert 'and dry crops perspective' after 'yields'
616	6424	2	Delete 'aa' before 'International.' Insert ' <i>Institute Annual Report for 1972</i> ' after 'Research'
718	7519	13	For 'Phthorimaea operculella' read ' <i>Phthorimaea operculella</i> '
731	7667	14	Insert 'oxamyl' between 'kg' and 'a.i.'
738	7755	2,3	For 'shchita Rastenii of soil and herbicides' read ' Herbicides and minimum tillage of soil '
759	7980	6,7	For '>CaSO ₄ >CaCO ₃ .' read 'with P at 2 meq/l and with'
761	8004	15	Insert '8.29 and' before '9.45'
771	8109	10	Insert 'per day' after '22%'
808	8513	7	For ' <i>Setaria italica</i> ' read ' <i>Setaria italica</i> '

FIELD CROP ABSTRACTS VOLUME 28, 1975

CONTENTS

REVIEW ARTICLE:

Leaf inclination and crop production, by B.R. Trenbath and J.F. Angus 231

ABSTRACTS:

CEREALS

Wheat	...	...	...	...	1	61	121	159	245	281	319	413	503	591	663	747
Oats	...	...	...	...	8	65	126	166	249	285	329	423	514	599	673	755
Rye	...	...	...	...	9	66	126	168	250	285	331	425	516	601	674	756
Triticale	...	...	...	...	9	66	—	169	—	—	332	426	516	601	674	756
Barley	...	...	...	...	10	66	126	169	250	286	333	426	516	601	675	757
Wild-rice	...	...	...	...	—	—	—	—	—	—	—	—	—	—	—	—
Maize	...	...	...	...	12	70	128	173	252	287	339	430	522	605	679	761
Sweet corn	...	...	...	...	17	—	—	182	256	291	346	439	529	611	686	766
Rice	...	...	...	...	17	75	131	182	256	291	347	439	529	611	686	766
Sorghum	...	...	...	...	21	80	—	185	257	293	351	443	538	617	691	771
<i>Pennisetum typhoides</i>	...	...	...	...	22	81	134	186	258	294	352	445	539	618	694	—
<i>Panicum miliaceum</i>	...	...	...	...	23	81	—	—	—	294	352	445	540	618	695	771
<i>Panicum miliare</i>	...	...	...	...	—	—	—	—	—	—	—	—	540	618	—	—
<i>Eleusine coracana</i>	...	...	...	...	23	82	—	186	—	—	—	446	540	618	695	771
Minor cereals	...	...	...	...	—	—	—	—	—	—	—	—	—	—	—	—
Cereals, general	...	...	...	...	23	82	134	186	258	294	353	446	540	619	695	772

LEGUMES

Soyabeans	...	...	...	...	24	83	135	187	258	295	356	448	542	619	697	773
Groundnuts	...	...	...	...	26	86	137	190	260	297	359	452	544	622	700	776
Peas	...	...	...	...	27	87	138	191	260	297	361	453	546	623	702	777
<i>Vicia</i> spp.	...	...	...	...	29	89	140	193	261	298	364	456	549	626	705	780
<i>Phaseolus</i> spp.	...	...	...	...	29	90	141	195	261	299	365	457	550	627	706	780
<i>Vigna</i> spp.	...	...	...	...	32	92	142	197	262	300	367	460	554	630	710	783
<i>Trifolium</i> spp.	...	...	...	...	—	—	—	—	—	—	—	—	—	—	—	—
<i>Voandzeia subterranea</i>	...	...	...	...	—	—	—	—	—	—	—	—	—	—	—	—
<i>Cajanus cajan</i>	...	...	...	...	33	94	—	197	262	—	368	—	555	630	710	783
<i>Cicer arietinum</i>	...	...	...	...	33	94	—	197	—	300	368	461	555	630	711	783
<i>Lens esculenta</i>	...	...	...	...	33	94	142	198	—	—	368	461	556	630	711	784
<i>Lupinus</i> spp.	...	...	...	...	33	94	142	198	262	300	368	462	556	631	711	784
Minor legumes	...	...	...	...	—	—	—	—	—	—	—	—	—	—	—	784
Legumes, general	...	...	...	...	34	96	143	199	263	—	369	463	556	632	711	784

ROOT CROPS

Sugar beet	...	...	...	...	34	96	143	199	263	301	369	463	557	632	712	785
Fodder beet	...	...	...	...	35	98	144	202	266	303	373	466	—	634	714	788
Turnips and Swedes	...	...	...	...	35	98	144	202	266	—	374	466	—	634	715	788
Potatoes	...	...	...	...	35	98	144	202	266	303	374	467	559	634	715	788
Carrots	...	...	...	...	38	—	—	—	—	—	382	472	—	—	—	792
Sweet potatoes	...	...	...	...	38	102	—	208	268	307	382	472	563	638	720	792
Cassava	...	...	...	...	39	103	148	208	268	307	382	472	564	638	720	792
Yams	...	...	...	...	39	—	—	209	—	307	382	473	564	638	721	793
Cocoyams	...	...	...	...	—	—	—	209	—	—	382	—	—	639	721	—
Minor root crops	...	...	...	...	—	—	—	—	—	—	—	—	—	—	—	—
Root crops, general	...	...	...	...	—	103	148	209	268	—	382	473	564	639	721	793

[illegible]

Castor	...	...	...	...	43	106	150	212	269	308	388	477	570	644	725	796
Sesame	...	...	...	...	43	—	151	212	—	308	389	478	570	644	726	—
Oilseed flax	...	...	...	...	43	106	—	213	270	—	389	478	571	644	726	797
Safflower	...	...	...	...	43	106	151	—	—	308	389	478	571	644	726	797
Sunflower	...	...	...	...	43	106	151	213	270	308	389	478	571	645	726	797
Rape	...	...	...	...	—	107	151	214	271	309	391	480	572	646	728	798
Minor oilseed crops	...	...	...	...	—	—	—	—	—	—	—	—	—	—	—	799
Oilseed crops, general	...	...	...	...	45	108	—	215	272	—	392	481	574	646	730	—

Tobacco	...	...	...	...	...	45	109	152	215	272	309	393	481	574	646	730	799
<i>Brassica oleracea</i>	...	...	...	...	...	48	109	153	218	—	—	396	483	577	648	732	—
Fodder radish	...	...	...	...	...	—	—	—	—	—	—	—	—	—	—	—	—
Buckwheat	...	...	...	...	...	48	109	153	218	273	310	396	483	577	648	732	801
Other crops	...	...	...	...	...	—	—	—	—	—	—	—	—	—	—	—	—
Miscellaneous crops, general	...	...	...	...	...	—	—	153	—	273	—	—	—	577	—	—	—

... .. 48 109 - 218 - - 396 484 - 649 732 80

Physiology	...	...	...	48	110	153	218	273	311	397	484	577	649	733	801
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Miscellaneous	...	...	...	50	112	155	222	275	313	—	491	581	—	—	—

... .. 51 113 155 222 275 313 402 491 — 653 737 80

USE ... = 113 = 222 276 = 402 491 581 653 737 80

... .. 51 113 155 222 276 313 403 492 582 654 738 80

SERVATION - 115 - 225 277 - 407 494 584 655 741 80

Y ... 52 115 156 225 277 313 407 495 588 656 741 80

... .. 53 115 - 226 - 315 408 495 586 - 742 80

.. ... 53 116 156 226 277 315 408 495 586 656 742 80

... .. 54 116 - 227 279 315 408 496 587 658 743 81

.. ... 58 117 156 228 279 316 410 498 589 660 745 81

